

The catalyst and the method of the present invention are favorably employed for a treatment using an aliphatic isocyanate having a low reactivity (e.g. hexamethylene diisocyanate or HDI). The catalyst of the present invention needs no heating to conduct a reaction in the reaction system since the activity of the catalyst is sufficiently high.

Claims 1-12 stand rejected as being unpatentable under 35 USC §103(a) over Madaj et al U.S. 5,889,068 in view of Simpson U.S. 5,733,945. Statements in support of the combination of these two documents and their application to claims 1-12 appear in the paragraph bridging pages 2 and 3 of the Official Action. Missing from the argument in support of the rejection is the discussion of how one of the references suggest it could be combined with the other. On this basis alone the rejection is defective.

It is well-established that before a conclusion of obviousness may be made based on a combination of references, there must have been a reason, suggestion, or motivation to lead one of ordinary skill in the art to combine those references. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617-18 (Fed. Cir. 1999) (“Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references.”)

Merely asserting that it would have been within the skill of the art to make the combination is not enough. *In re Fine*, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988) (Holding that there was no support for the Examiner’s mere assertion that it would have been obvious to substitute one type of detector for another in the system of the primary reference); *In re Jones*, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992) (Holding that there was no suggestion to combine a primary herbicide reference with secondary references directed to shampoo additives or byproducts of morpholines to arrive at the claimed invention.).

There is nothing in any of the cited references to suggest the desirability of the combination or modification in the manner indicated by the Examiner. Specifically, there is no motivation or suggestion to combine Simpson with Madaj. Thus, the mere fact that references can be combined or modified (and Applicants believe they cannot be) does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); MPEP § 2143.01. Hence, the

Examiner's attempt to combine the cited references alone without any suggestion in the references of the desirability of the modification is improper and should be withdrawn.

Next the individual citations are discussed for the relevance, if any, of their contents.

Madaj et al relate to a polyurethane foam (esp. integral skin foam) and a method for its production. An aromatic isocyanate with a high reactivity (MDI) is employed as an isocyanate, and water is employed as a blowing agent.

In Madaj, a tertiary amine catalyst and an organometallic catalyst are exemplified as catalysts. And, in Madaj, the tertiary amine catalyst is called a "heat-activated catalyst", and it is therefore apparent that a reaction under heating is required by Madaj.

The examiner will note the examples in Madaj employ the following two types of catalysts such as tertiary amine catalysts and organometallic catalysts which are used together.

The tertiary amine catalysts are:

CAT A: a 1:3 mixture of triethylene diamine in 1,4-butanediol commercially available from Air Products as Dabco S-25, and

CAT B: a tertiary amine catalyst consisting of 30% amine and 70% 1,4 butanediol, commercially available from Air Products as Dabco 1028;

and the organometallic catalysts are:

CAT C: dibutyltin dilauryl mercaptide, commercially available from Witco as UL-1,

CAT D: dibutyltin dilaurate catalyst, commercially available from Air Products as T-12, and

CAT E: an n-alkyl substituted organotin catalyst, commercially available as Topcat 190 from Tylo Industries, Parsippany, NJ.

Please bear in mind that Dabco S-25 and Dabco 1028 are not equivalent to the bicyclic tertiary amine compound of the present invention.

Next, Simpson relates to a method for producing a polyurethane foam employing a metal acetylacetonate as a catalyst, and it also employs an aromatic isocyanate having a high reactivity (MDI) as an isocyanate.

In Simpson, water is not employed in the reaction system since the metal acetylacetonate has a low water-resistance. Further, since the metal acetylacetonate disclosed in Simpson does not have a high activity, it is necessary to carry out a reaction under heating.

In the Official Action the examiner argues in support of the rejection that "it would have been obvious to one of ordinary skill in the art to modify the catalytic composition of Madaj et al to use the improved organometallic metal acetylacetonate catalyst as disclosed in Simpson because the normal desire of scientists or artisans is to improve upon what is already generally known". It is counsel's understanding that the examiner is arguing one of ordinary skill in the art encountering the Madaj et al reference would seek to improve upon it and look for "improved" catalysts. In other words Madaj would be modified by more recent events and technology. However, looking at the two applied references it will appear that this is just the opposite – the Madaj patent is based upon an application filed on July 24, 1997 yet the Simpson patent is based upon an application filed two years earlier in July of 1995. This is yet another reason why the rejection is defective.

Considering next the combination of these two references and the results of their combined disclosures, it will be apparent that an unworkable result would be obtained – the disclosures of the two documents are not nearly as inter-related as the Official Action seems to suggest.

As it is clear from the above discussion, the metal acetylacetonate described in Simpson is a catalyst hardly usable by itself in a water-containing system. Thus the combination of the two references is not workable. Therefore, the metal acetylacetonate cannot be employed instead of the organometallic catalyst described in Madaj et al.

Further, even if the organometallic catalyst described in Madaj et al *could* be replaced with the metal acetylacetonate described in Simpson, only the following treatments are conceivable:

- to employ an aromatic isocyanate having a high reactivity as an isocyanate,
- to employ water as a blowing agent, and
- to carry out a reaction under heating.

None of these treatments are suggestive of the present invention.

Following the examiner's suggestion at page 3, lines 4-7 of the Action to use an "improved" organometallic metal acetylacetonate catalyst it is expected that those skilled in the art should adopt, as an isocyanate, an aromatic isocyanate having a high reactivity as described in Madaj et al and Simpson, and, as catalysts, they should adopt a combination of Dabco S-25 or

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Dabco 1028 which is specifically disclosed in Madaj et al and the metal acetylacetonate described in Simpson, on the basis of the teachings of each of these references.

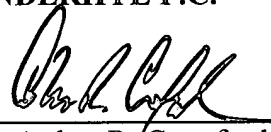
Instead of adopting such an approach, the examiner argues the use of an approach not reasonably imaginable from the teachings or suggestions in the references indicating, at best, a hindsight reconstruction of the prior art.

For the above reasons it is respectfully submitted that the claims of this application define inventive subject matter. The rejection in issue is based upon inaccurate conclusions, is not a combination of documents suggested in either one of them and would lead to an unworkable result. Reconsideration and allowance are solicited. Should the examiner require further information, please contact the undersigned by telephone.

Respectfully submitted,

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